

Amendments To The Claims:

15. (currently amended) A stationary gas turbine for power generation, comprising:  
an injection apparatus for injecting a liquid into an air stream that is sucked in by a compressor;

a fuel mixed with the air stream and combusted in a combustion chamber to form a hot gas which expands as it flows through a downstream turbine part; and

a humidity-measuring device for recording the humidity of the air stream upstream of the injection apparatus; and

a first temperature-measuring device for recording a temperature of the air stream upstream of the injection apparatus, wherein the temperature-measuring device is arranged upstream of the injection apparatus, and the temperature of the air stream at an inlet of the compressor is calculated by the measured temperature; and

a second temperature-measuring device for recording a turbine outlet temperature of an exhaust present at an outlet of the turbine; and

a controller unit controlling flow of the fuel into the gas turbine comprising:

inputs receiving the recorded humidity from the humidity-measuring device and the temperatures from the first and second temperature-measuring devices;

an output connected to a shut-off member for controlling the flow of fuel;

wherein the controller unit is configured to produce the output by:

determining a temperature of the air stream at an inlet of the compressor,

determining a corrected turbine outlet temperature as a function of the temperature of the air stream at the inlet of the compressor,

comparing the determined corrected turbine outlet temperature to an inputted desired value of corrected turbine outlet temperature, and

producing the output effective to control the shut-off member as a function of the compared corrected turbine outlet temperatures.

16 - 17. (cancelled)

18. (currently amended) The gas turbine as claimed in claim 15, wherein the temperature and humidity distributions of the air stream can be predetermined in the form of diagrams.

19 – 28. (cancelled)

29. (new) The controller unit as claimed in claim 15, wherein the controller unit is adapted to determine the temperature of the air stream at the inlet of the compressor as a function based on the temperature and humidity of the airstream upstream of the injection apparatus.

30. (new) The controller unit as claimed in claim 15, wherein the controller unit is adapted to calculate the temperature of the air stream at the inlet of the compressor according to the function:

$$T_u - \eta \cdot (T_U - T_{\text{WetBulb}})$$

wherein  $T_U$  is the measured air temperature of the air stream upstream of the injection apparatus,  $\eta$  is an efficiency of evaporation of the liquid in the intake airstream, and  $T_{\text{WetBulb}}$  is a minimum feasible temperature at which 100% of the liquid has evaporated at the compressor inlet.

31. (new) The controller unit as claimed in claim 15, wherein the controller unit is adapted to calculate the corrected turbine outlet temperature according to:

$$T_{AT} - k_1 \cdot T_{\text{WetBulb}}$$

wherein  $T_{AT}$  is the exhaust gas temperature at the turbine outlet,  $k_1$  is a constant, and  $T_{\text{WetBulb}}$  is the minimum feasible temperature at which 100% of the liquid has evaporated at the compressor inlet.

32. (new) The controller unit as claimed in claim 15, wherein the controller unit is adapted to calculate the corrected turbine outlet temperature according to:

$$T_{AT} = k_1 \cdot [T_u - \eta \cdot (T_U - T_{WetBulb})]$$

wherein  $T_U$  is the air stream temperature upstream of the injection apparatus,  $T_{AT}$  is the exhaust temperature at the turbine outlet, and  $T_{WetBulb}$  is a minimum feasible temperature at which 100% of the liquid has evaporated at the compressor inlet, and  $\eta$  is an efficiency of evaporation of the liquid at the compressor inlet..